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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,306

04/24/2007

Colin John Jones

278-P-002USWO

4474

23322 7590 12/24/2009  
IPLM GROUP, P.A.  
POST OFFICE BOX 18455  
MINNEAPOLIS, MN 55418

EXAMINER

ALLEN, CAMERON J

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

12/24/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,306	<b>Applicant(s)</b> JONES ET AL.	
	<b>Examiner</b> CAMERON J. ALLEN	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 15-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-21 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/02/2009 has been entered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 11, 12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Lockhart WO 87/01057A.

Regarding claim 1, the Lockhart reference discloses an apparatus for dewatering a fine suspension comprising a container, including an array (Page 19 line 25) of electrodes spaced apart that are attached to a fabric filter of geotextile (Page 9 lines 21-31) fabric used in electro-kinetic (Page 2 line 2) dewatering by applying a potential difference across the electrodes that drains water away from the other material. (Abstract and Page 2 lines 4-14)

Regarding claim 2, the Lockhart reference discloses the device of claim 1 that is capable of reducing the liquid content of a material comprising a dispersion or suspension of inorganic particles being byproducts of mining, manufacturing or other industrial processes. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding claim 11, the Lockhart reference discloses the device of claim 1 wherein the at least one electrode comprises a generally inherently non-conductive geosynthetic material in association with at least one metallic element to produce a composite conducting geosynthetic material. (Page 9 lines 21-31)

Regarding claim 12, the Lockhart reference discloses the device of claim 11 further comprising geosynthetic material (page 9 lines 21-31) incorporating a plurality of elongate conducting elements there within, in one or more parallel arrays (page 19 line 25-33 see figure 4 anodes 90 or 92 are parallel array) also the material comprises a non-woven polymeric material. (Page 20 line 23)

Regarding claim 14, the Lockhart reference discloses the device of claim 1 wherein the at least one electrode comprises inherently conducting material. (Column 18 line 22 metal mesh)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3- 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lockhart as applied above in further view of Miller US 2003/0150798 A1.

Regarding claim 3, the Lockhart reference discloses the device of claim 1 but does not disclose wherein the at least one electrode is also a synthetic material. The Miller reference discloses a dewatering device that uses synthetic material as an electrode.(section 0035) It would have been obvious to one of ordinary skill in the art the time of the invention to modify the Lockhart reference by using an electrode made of synthetic material as disclosed in the Miller reference since it would yield the expected result of performing the function of an electrode.

Regarding claim 4, the Lockhart in view of Miller references discloses the device of claim 3. The Lockhart reference also discloses that the electrode is embedded in the fabric and the fabric is used to drain water through the walls. (Column 3 line 21-36 and Column 6 lines 31-39) The modification of Lockhart and Miller puts the synthetic electrode in the fabric and integral with the drain. (Lockhart Page 18 line 1-10)

Regarding claim 5, the Lockhart in view of Miller references disclose the device of claim 4 wherein the receiving zone is at least partly defined by a filtration membrane permeable to the liquid but impermeable to at least some particulate solids contained within the material, which filtration membrane comprises the conducting electro kinetic textile or other synthetic electrode. (Lockhart Column 8 lines 33-39 and page 9 lines 1-9)) The Examiner interprets a membrane to be a thin sheet of material.

Regarding claim 6, the Lockhart In view of Miller references disclose the device of claim 5 wherein, the membrane is a porous sheet-like material (Page 2 lines 26-38) and an array (page 1 line 25) The Examiner interprets the mesh to be an array of conducting elements including lateral current carriers and a transverse current distributor. (page 18 line 22)

Regarding claim 7, the Lockhart in view of Miller references disclose the device of claim 6 wherein the filter membrane is a nylon composite including metal electrodes that act as conducting elements in a composite material composition. (Page 20 lines 6-24)

Regarding claim 8, the Lockhart in view of Miller references disclose the device of claim 5 wherein the apparatus further comprises a separate conductor so disposed

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within the apparatus as to be caused during use to come into contact with the filtration membrane over at least a part of the area thereof. (Page 9 lines 10-20 the metal frame is in contact with the membrane and is conductive.

Regarding claim 9, the Lockhart in view of Miller references disclose the device of claim 5 wherein the at least one electrode at least partly comprises conducting particles. (Page 9 lines 1-9)

Regarding claim 10, the Lockhart in view of Miller references disclose the device of claim 9 wherein the at least one electrode is a conductive mesh covered by a fabric that can be a geosynthetic material creating a geosynthetic material with a conductive center. (Page 9 lines 1-9 and 21-35)

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lockhart as applied above in further view of Kunkle US 4,680,104.

Regarding claim 13, the Lockhart reference discloses the device of claim 1 but does not disclose wherein a conducting element comprises metal coated in mixed metal oxide. The Kunkle reference discloses a electro kinetic dewatering device that uses belts as electrodes made of titanium or tantalum substrate with a mixed metal oxide coating. (col 8 lines 54-64) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Lockhart electrode with the Kunkle electrode, since the Kunkle reference discloses it would provide the expected result of electro kinetic dewatering.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAMERON J. ALLEN whose telephone number is (571)270-3164. The examiner can normally be reached on M-Th 9-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CJA

/Walter D. Griffin/  
Supervisory Patent Examiner, Art Unit 1797